

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An optical information medium ~~(20)~~ for recording by means of a focused radiation beam ~~(10)~~ having a radiation wavelength λ and a numerical aperture NA, said medium ~~(20)~~ having a substrate ~~(1)~~, a stack ~~(2)~~ of layers provided thereon, the stack ~~(2)~~ comprising at least a first recording stack ~~(3)~~ and k radiation beam transmissive layers, ~~(4, 5, 6, 7, 11, 12, 13)~~ each radiation beam transmissive layer ~~(4, 5, 6, 7, 11, 12, 13)~~ having a refractive index n_i and an average thickness d_i μm and $1 \leq i \leq k$ and $k \geq 2$,
characterized in that the average thickness d_k of transmissive layer k satisfies the equation

$$d_k = D(n_k) \left[1 - \sum_{i=1}^{k-1} \frac{d_i}{D(n_i)} \right] \pm 0.01 D(n_k) \mu\text{m}, \text{ in which } \sum_{i=1}^{k-1} \frac{d_i}{D(n_i)} < 1$$

and $D(n)$ represents the thickness versus refractive index function in μm , of a single layer radiation beam transmissive layer causing minimal spherical wavefront aberration in the focal point of the focused radiation beam ~~(10)~~, said focal point being at the recording layer of the first recording stack ~~(3)~~.

2. (Currently Amended) ~~An The optical information medium (20)~~
as claimed in Claim 1,

characterized in that the refractive index n_i of each of the

radiation beam transmissive layers ~~(4, 5, 6, 7, 11, 12, 13)~~

satisfies

$$1.45 \leq n_i \leq 1.70.$$

3. (Currently Amended) ~~An The optical information medium (20)~~
as claimed in Claim 1 or 2,

characterized in that

$$D(1.60) = 100 \text{ } \mu\text{m}.$$

4. (Currently Amended) ~~An The optical information medium (20)~~
as claimed in Claim 3,

characterized in that

$D(n)$ is represented by consecutive connection, with

substantially linear line parts, of coordinates $(n, D(n))$ with the
values

$(1.45, 98.5)$, $(1.50, 98.6)$, $(1.55, 99.2)$, $(1.60, 100)$, $(1.65,$
 $101.1)$ and $(1.70, 102.4)$.

5. (Currently Amended) ~~An The optical information medium (20)~~
as claimed in Claim 1 or 2,

characterized in that

$$D(1.60) = 300 \text{ } \mu\text{m}.$$

6. (Currently Amended) ~~An The~~ optical information medium ~~(20)~~
as claimed in Claim 5,
characterized in that

D(n) is represented by consecutive connection, with
substantially linear line parts, of coordinates (n, D(n)) with the
values

(1.45, 303.8), (1.50, 301.0), (1.55, 299.9), (1.60, 300), (1.65,
301.1) and (1.70, 303.0).

7. (Currently Amended) ~~An The~~ optical information medium ~~(20)~~
as claimed in ~~any of Claims 1-6~~ Claim 1 or 2,
characterized in that

$$d_k = D(n_k) \left[1 - \sum_{i=1}^{k-1} \frac{d_i}{D(n_i)} \right] \pm 0.001 D(n_k) \cdot m.$$

8. (Currently Amended) A method of manufacturing an optical
information medium ~~(20)~~ for recording by means of a focused
radiation beam ~~(10)~~ having a radiation wavelength • and a numerical
aperture NA, said method comprising the steps of:

—providing a substrate ~~(1)~~; and
—depositing a stack ~~(2)~~ of layers thereon, the stack ~~(2)~~
comprising at least one recording stack ~~(3)~~ and k radiation beam
transmissive layers ~~(4, 5, 6, 7, 11, 12, 13)~~, each radiation beam
transmissive layer having a refractive index n_i and average

thickness d_i • m and $1 \leq i \leq k$ and $k \geq 2$,

characterized in that

~~the step of depositing~~ the k^{th} layer is carried out with an average thickness d_k which is determined by the formula

$$d_k = D(n_k) \left[1 - \sum_{i=1}^{k-1} \frac{d_i}{D(n_i)} \right] \pm 0.01 D(n_k) \cdot m, \text{ in which } \sum_{i=1}^{k-1} \frac{d_i}{D(n_i)} < 1 \text{ and}$$

15 $D(n)$ represents the thickness versus refractive index function in $\cdot m$, of a single layer radiation beam transmissive layer causing minimal spherical wavefront aberration in the focal point of the focused radiation beam ~~(10)~~, said focal point being at the recording layer of the first recording stack ~~(3)~~.

9. (Currently Amended) ~~A~~ ~~The~~ method of manufacturing an optical information medium ~~(20)~~ as claimed in Claim 8, characterized in that the refractive index n_i of each of the radiation beam transmissive layers ~~(4, 5, 6, 7, 11, 12, 13)~~
5 satisfies

$$1.45 \cdot n_i \cdot 1.70.$$

10. (Currently Amended) ~~A~~ ~~The~~ method of manufacturing an optical information medium ~~(20)~~ as claimed in Claim 8 or 9, characterized in that

$$D(1.60) = 100 \cdot m.$$

11. (Currently Amended) ~~A~~ ~~The~~ method of manufacturing an optical information medium ~~(20)~~ as claimed in Claim 10,

characterized in that

D(n) is represented by consecutive connection with
5 substantially linear line parts of coordinates (n, D(n)) with the
values

(1.45, 98.5), (1.50, 98.6), (1.55, 99.2), (1.60, 100), (1.65,
101.1) and (1.70, 102.4).

12. (Currently Amended) ~~A-The~~ method of manufacturing an
optical information medium ~~(20)~~ as claimed in Claim 8 or 9,
characterized in that

$D(1.60) = 300 \text{ } \mu\text{m}.$

13. (Currently Amended) ~~A-The~~ method of manufacturing an
optical information medium ~~(20)~~ as claimed in Claim 12,
characterized in that

D(n) is represented by consecutive connection with
5 substantially linear line parts of coordinates (n, D(n)) with the
values
(1.45, 98.5), (1.50, 98.6), (1.55, 99.2), (1.60, 100), (1.65,
101.1) and (1.70, 102.4).